

## REMARKS

Claims 1- 15 and 22 - 34 are pending. Claims 16 – 21 were previously canceled without waiver or prejudice to file in a continuing/divisional application.

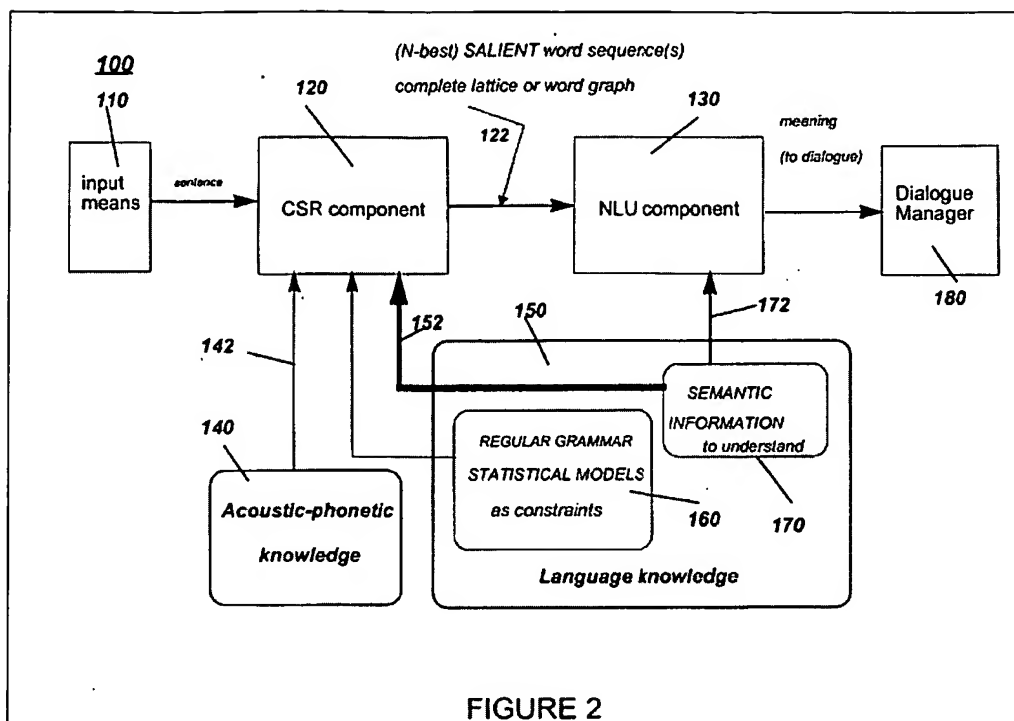
The Examiner now newly cites U.S. Patent No. 6,397,179 to Crespo et al. and combines it with Braden-Harder et al. – U.S. Patent No. 5,983,822 to reject the claims under § 103. These rejections are traversed for the reasons set forth below; in brief, Applicant submits that the Crespo et al. reference does not disclose a *natural language engine* that employs “semantic decoding and statistical based processing” ; rather, at best Crespo et al. shows that the *speech recognizer* uses such types of operations. Moreover the claims have been further amended to distinguish over the art. Thus reconsideration is respectfully submitted.

### **Response to Rejections Claims 1 – 3, 6 - 9, 13, 22, 24 – 26 and 28 under under § 103 based on Crespo et al ('179) taken with Braden Harder et al. ('822)**

The newly cited Crespo et al. reference discloses primarily a speech recognizer that was to employ some semantic information to improve accuracy of word recognition. See Abstract. Thus in FIG. 2 of the reference, Crespo's contribution to this field of art is purportedly the feedback arrow 152 shown below, in which “semantic” information is provided to the CSR (continuous speech recognition) component 120. As the disclosure notes at 6:52 – 59:

“The system 100 is distinguished from known systems...in that the knowledge 150 comprising semantic information is fed not only to the NLU 130, in a conventional manner, but also to the CSR 120. The linkage 152 between the semantic information 170 and the CSR component 120 is represented by a heavy arrow”

This is illustrated in FIG. 2 reproduced below.



Conversely, the Examiner will note that the “statistical models” 160 shown in FIG. 2 are described as part of the “Language knowledge” that is used by the speech recognizer 120. But there is simply no indication that NLU component 130 uses any form of statistical processing. Consequently, Applicant submits that Crespo et al. does not teach this aspect of the claims (i.e., that a natural language unit uses statistical processing) and thus even when combined with Braden Harder et al. cannot render the claim obvious.

To further distinguish over such reference, Applicant has amended the claim to read that the “.... semantic decoding is performed on entire word sentences.” In contrast, the semantic information shown in the art does not consider variations of entire sentences as a whole.

Based on the present amendment Applicant submits that claim 1 should be determined to contain allowable subject matter. Reconsideration is thus respectfully requested.

Dependent claims 2 – 3, 6 - 9, 13: these claims should be allowable for the same reasons as claim 1 and for the following reasons:

For claim 2, the Examiner cites to FIG. 6A, and steps 610/535 for the first level query, and step 645 for the second level query. But the Examiner will note that this second level “query” he identifies is not directed to the same set of records, but rather, a subset of limited records already retrieved at step 640.

For claims 7/8: the Examiner will note again that Crespo et al. only discloses basic *speech recognition* statistical processing. There is absolutely no indication that the noun phrases disclosed in Braden-Harder could be used or adapted to be compatible with the Crespo et al. speech recognizer. Braden-Harder et al. in turn does not disclose speech recognition + natural language processing, so it also cannot meet this limitation.

For claim 9: the Examiner cites that Crespo et al. shows a real-time behavior; (at col. 1, ll. 21 – 26) but this is not relevant, because the Examiner must first modify Crespo et al. with Braden-Harder (to arrive at the combination of claim 1) and then show that such *combined system* would operate in real-time. This is not supported by the record, since, as noted above, there is no indication that modifying Crespo et al. in this manner would allow the latter to retain its real-time characteristics.

Independent claim 22 and dependent claims 25 and 28 should be allowable for at least the same reasons already expressed above.

**Response to rejection of Claim 4: Crespo et al. taken with Braden-Harder et al. and taken with McDonough et al. (5,625,748)**

Dependent claim 4: this claim should be allowable for the same reasons as claim 1. McDonough et al. does not cure any of the deficiencies of the other references in this regard. Furthermore McDonough et al. is apparently generally discussing a mapping of messages to topics. The Examiner states that McDonough et al. employs a Kullback-Liebler distance measure; but there is no indication that this is the same as claim 4 in which a specific *term frequency* calculation is based on calculating a lexical distance between each word of the recognized query and the topic query entries.

**Rejection of Claims 5, 14 and 23 Crespo et al. taken with Braden-Harder et al. and taken with Appelt et al. ('026)**

These claims should be allowable for at least the same reasons already expressed above.

**Rejection of Claims 10 – 12 and 27 – 28; Crespo et al. taken with Braden-Harder et al. and taken with Barclay et al**

These claims should be allowable for the same reasons as claims 1 and 22 above. Barclay et al is not believed to cure the deficiencies of the other references in this regard, and does not appear to show any degree of optimization as set out in claim 12, or the distribution of operations set out in claim 28.

**Rejection of Claim 15: Crespo et al. taken with Braden-Harder et al. taken with Agarwal et al. (5,842,196)**

This claim should be allowable for the same reasons as claims 1 and 22 above.

**New claims 29 - 34**


These dependent claims just add more specific limitations to the semantic decoding performed by embodiments of the present claims, as discussed generally in the specification at pps 55, ll. 13 – 62, ll. 11. They do not appear to be disclosed by the prior art, and should be allowable for at least the same reasons as claims 1 and 22.

**Conclusion**

Applicant has addressed all the outstanding issues presented in the most recent Office Action in earnest fashion to place the claims in condition for allowance over the prior art. A Petition and fee for a two month extension of time is also enclosed herewith. No additional fees are believed due for new claims 29 - 34 in light of the previous cancelation of claims 16 – 21. Please charge all fees due to deposit account no. 501-244.

Should the Examiner wish to discuss anything related to this case in person, feel free to contact the undersigned at any convenient time.

Respectfully submitted,

A handwritten signature in cursive script, reading "J. Nicholas Gross". The signature is written in black ink and is positioned above the printed name.

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